FIG. 1 (PRIOR ART)

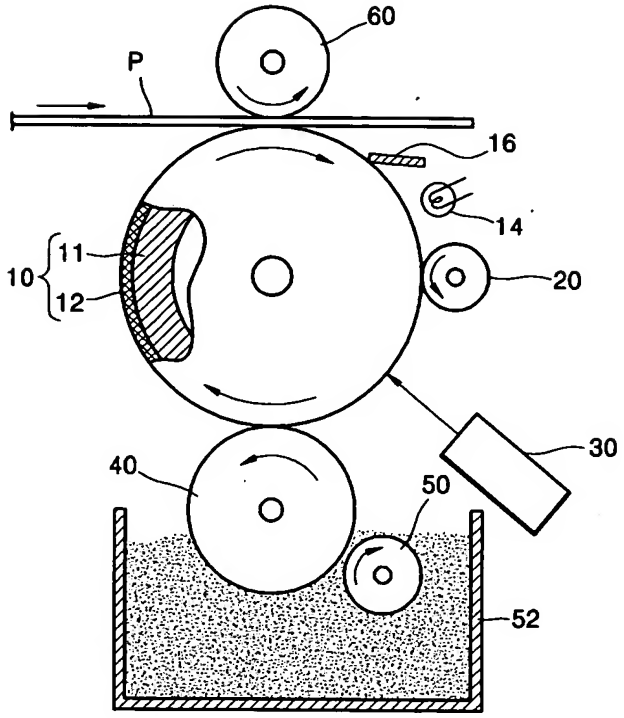


FIG. 2

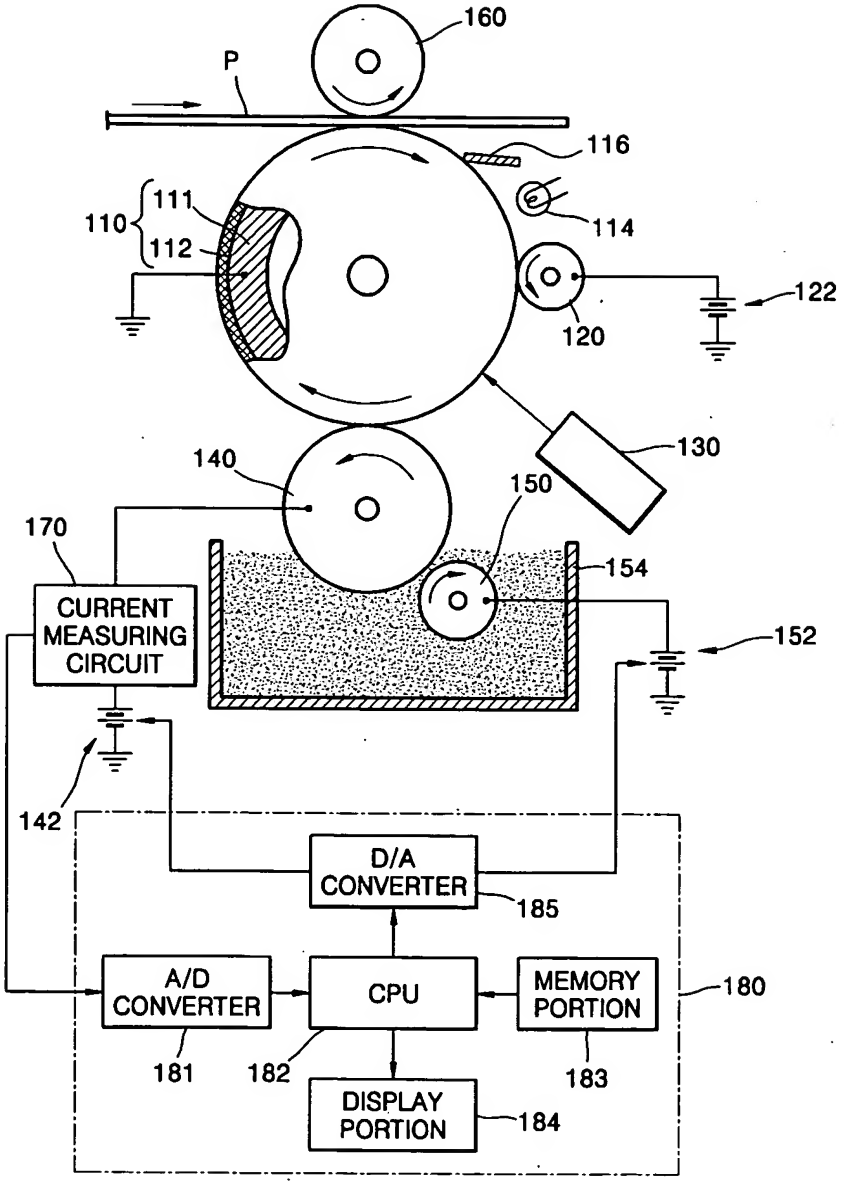

160
P
116
111
110
112
114
122
120
130
140
150
170
154
CURRENT MEASURING CIRCUIT
152
142
D/A CONVERTER
185
A/D CONVERTER
CPU
MEMORY PORTION
180
181
182
183
DISPLAY PORTION
184

FIG. 3

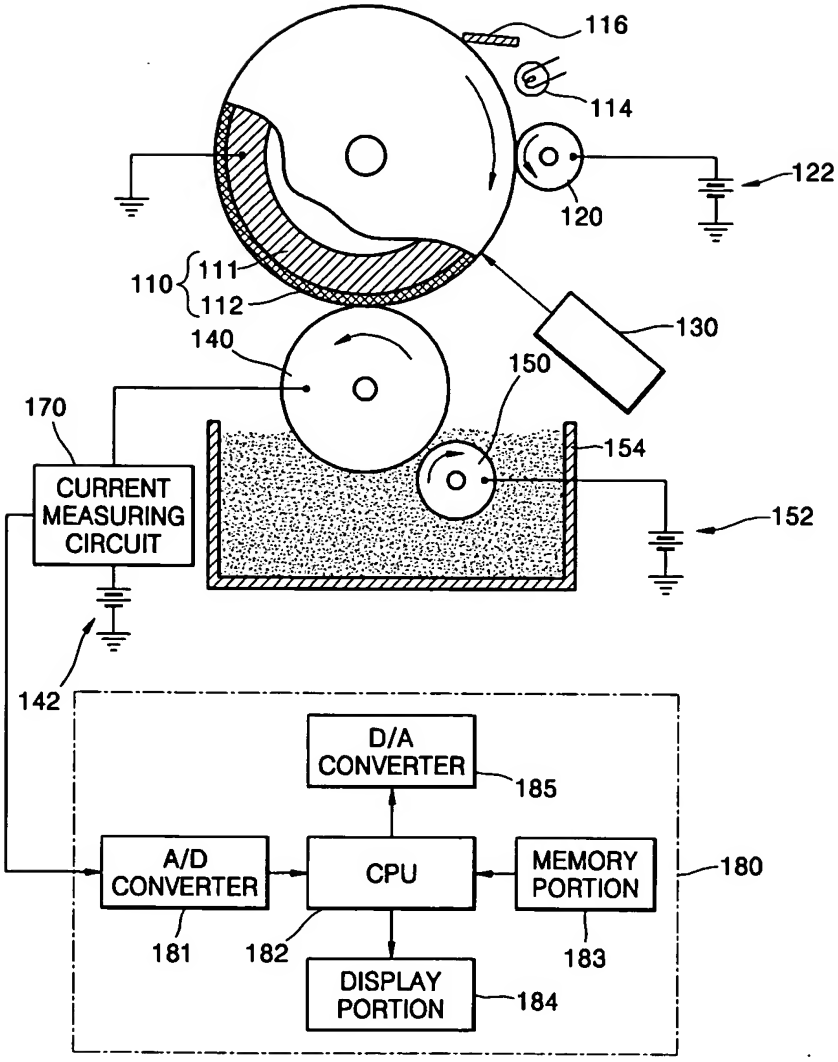

116
114
122
120
110
111
112
130
140
150
170
154
152
CURRENT MEASURING CIRCUIT
142
D/A CONVERTER
185
A/D CONVERTER
CPU
MEMORY PORTION
180
181
182
183
DISPLAY PORTION
184

FIG. 4

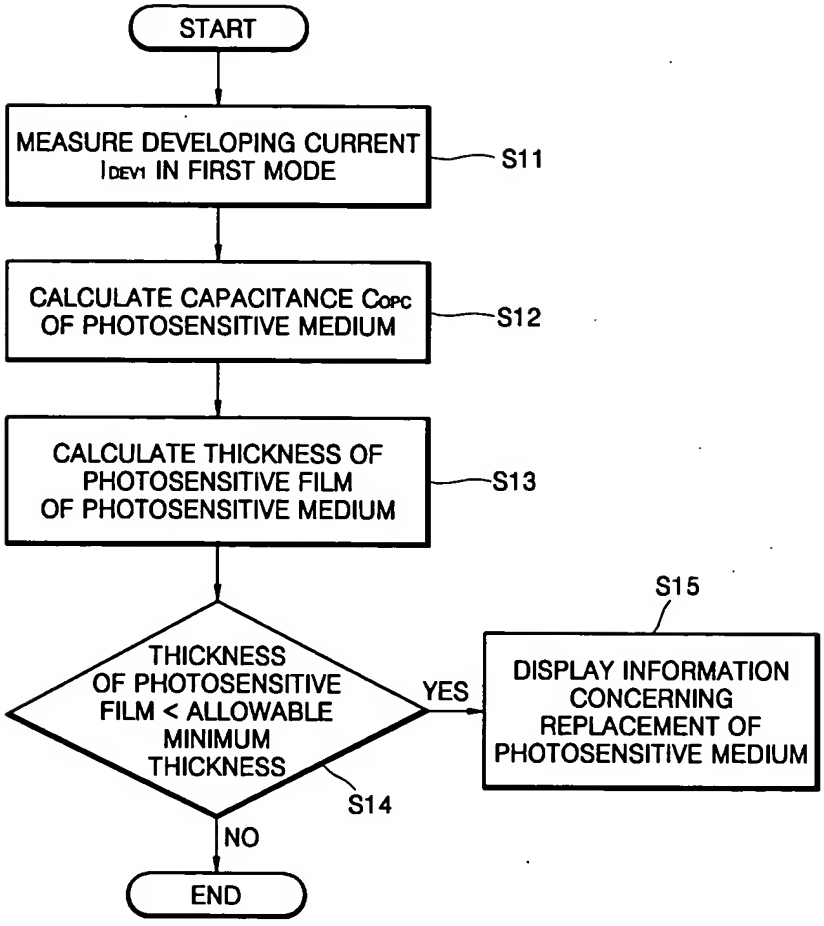

START
MEASURE DEVELOPING CURRENT I_{DEV1} IN FIRST MODE
S11
CALCULATE CAPACITANCE C_{OPC} OF PHOTOSENSITIVE MEDIUM
S12
CALCULATE THICKNESS OF PHOTOSENSITIVE FILM OF PHOTOSENSITIVE MEDIUM
S13
THICKNESS OF PHOTOSENSITIVE FILM < ALLOWABLE MINIMUM THICKNESS
S14
YES
S15
DISPLAY INFORMATION CONCERNING REPLACEMENT OF PHOTOSENSITIVE MEDIUM
NO
END

FIG. 5

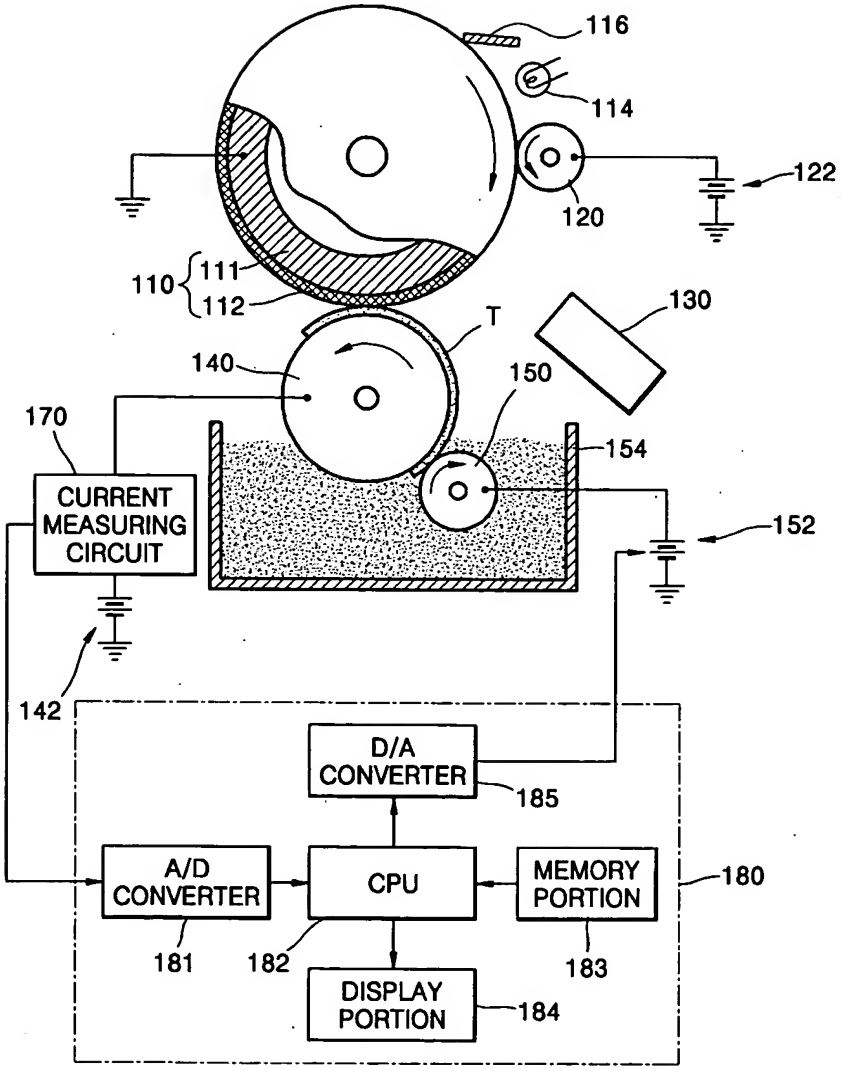

116
114
122
120
110
111
112
T
130
140
150
154
170
CURRENT MEASURING CIRCUIT
152
142
D/A CONVERTER
185
A/D CONVERTER
CPU
MEMORY PORTION
180
181
182
183
DISPLAY PORTION
184

FIG. 6

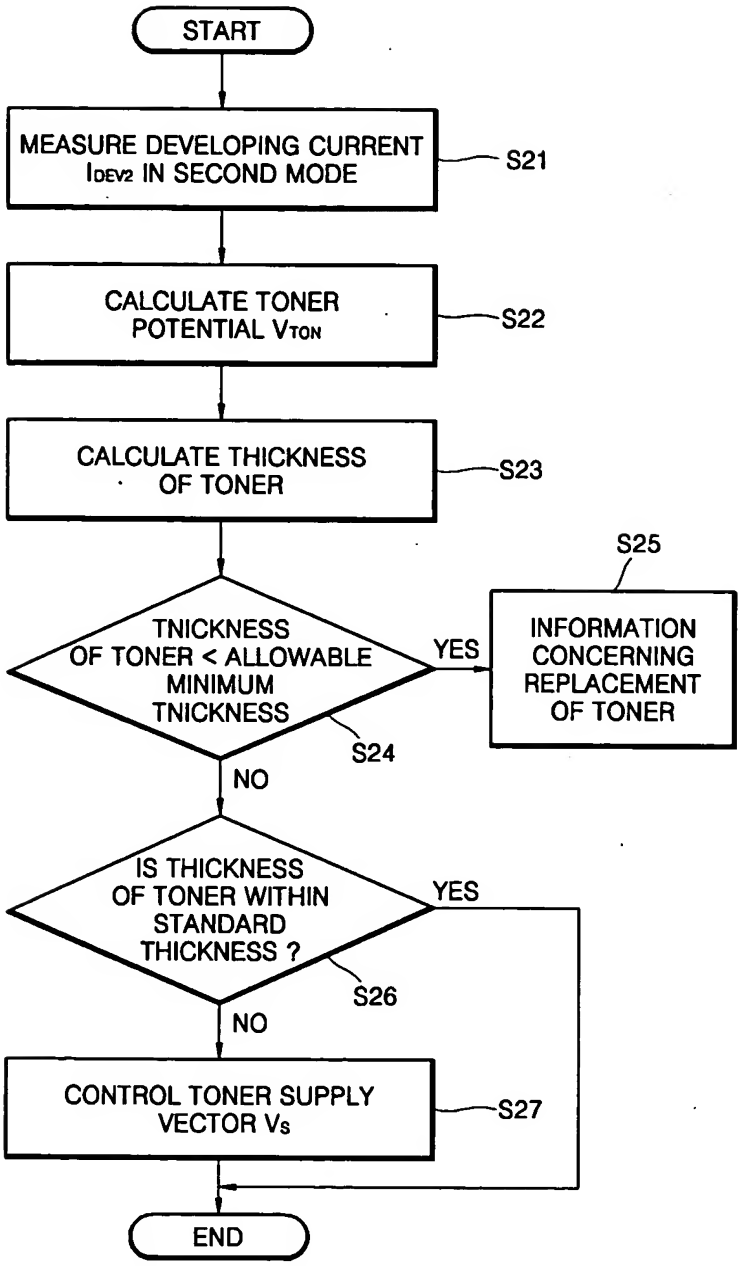

START
MEASURE DEVELOPING CURRENT I_{DEV2} IN SECOND MODE
S21
CALCULATE TONER POTENTIAL V_{TON}
S22
CALCULATE THICKNESS OF TONER
S23
TNICKNESS OF TONER < ALLOWABLE MINIMUM TNICKNESS
S24
YES
S25
INFORMATION CONCERNING REPLACEMENT OF TONER
NO
IS THICKNESS OF TONER WITHIN STANDARD THICKNESS ?
S26
YES
NO
CONTROL TONER SUPPLY VECTOR V_S
S27
END

FIG. 7

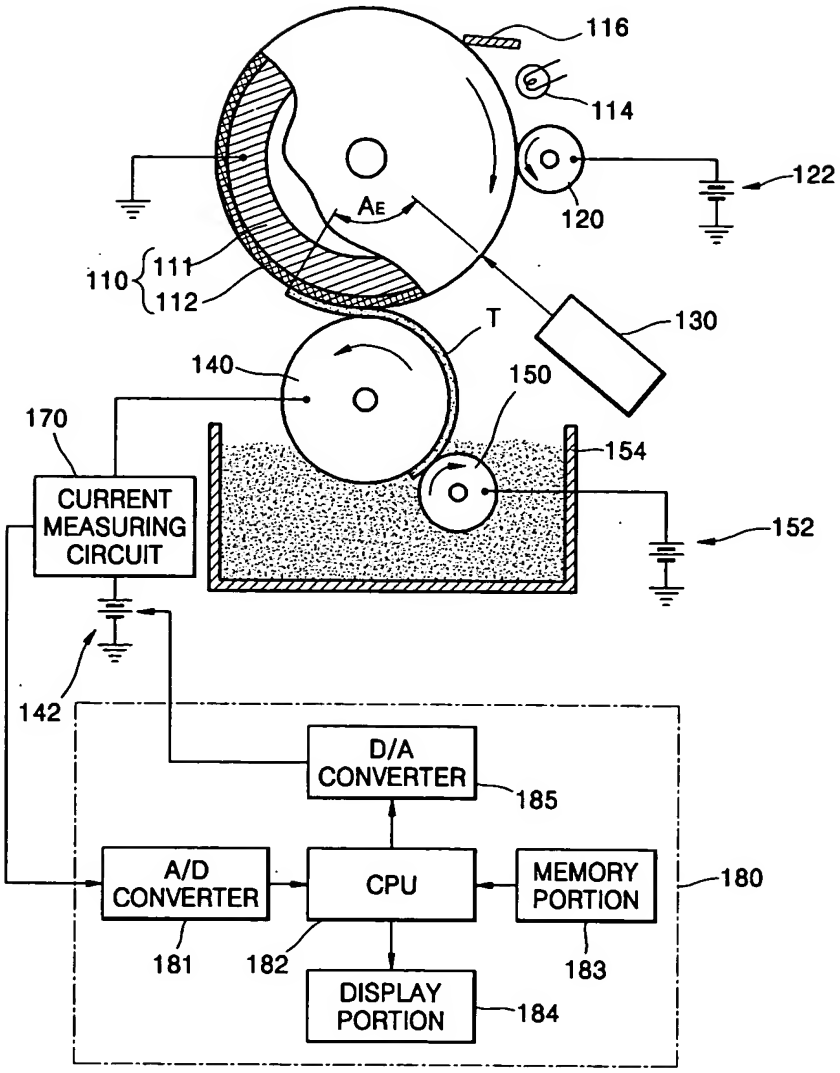
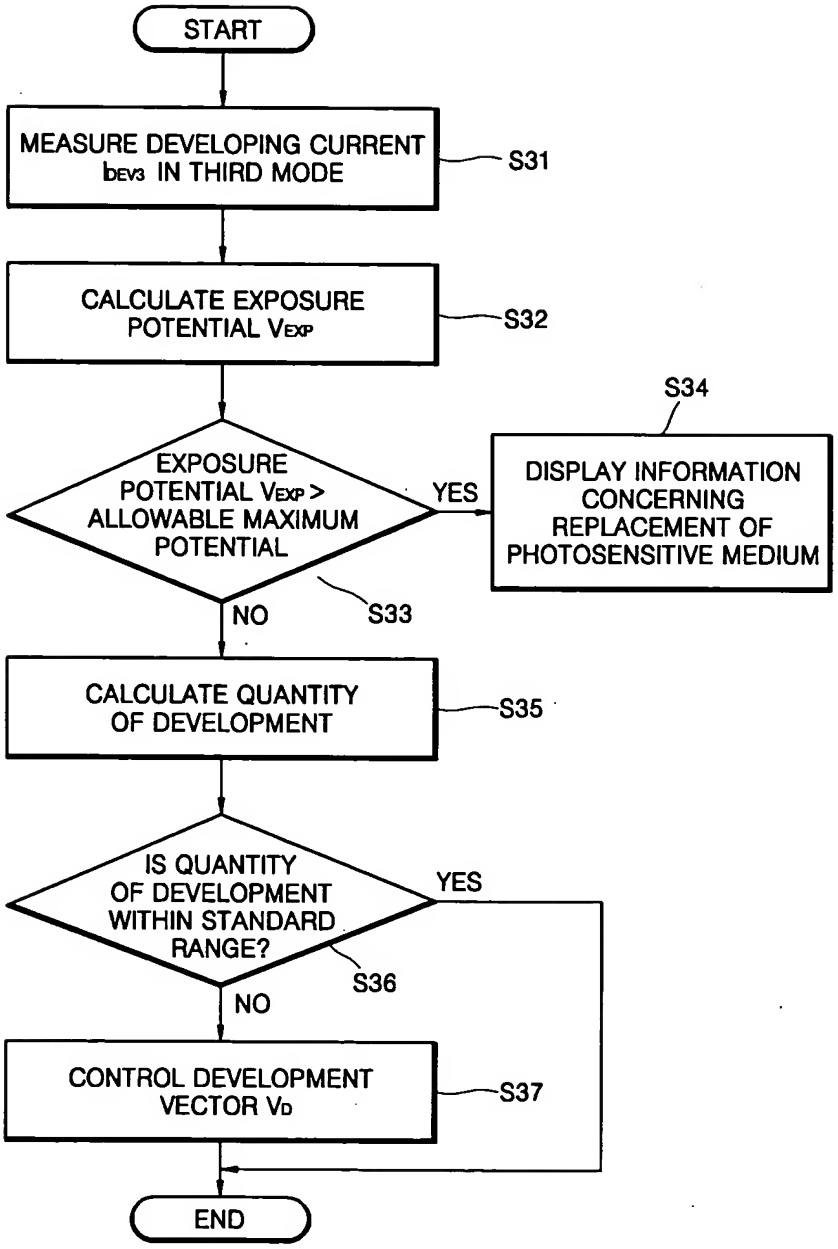

116
114
122
120
AE
110
111
112
T
130
140
150
170
154
CURRENT MEASURING CIRCUIT
152
142
D/A CONVERTER
185
A/D CONVERTER
CPU
MEMORY PORTION
180
181
182
183
DISPLAY PORTION
184

FIG. 8


START
MEASURE DEVELOPING CURRENT I_{DEV3} IN THIRD MODE
S31
CALCULATE EXPOSURE POTENTIAL V_{EXP}
S32
EXPOSURE POTENTIAL V_{EXP} > ALLOWABLE MAXIMUM POTENTIAL
YES
S34
DISPLAY INFORMATION CONCERNING REPLACEMENT OF PHOTOSENSITIVE MEDIUM
NO
S33
CALCULATE QUANTITY OF DEVELOPMENT
S35
IS QUANTITY OF DEVELOPMENT WITHIN STANDARD RANGE?
YES
S36
NO
CONTROL DEVELOPMENT VECTOR V_D
S37
END